

In situ observations of PSCs generated by gravity waves

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During SOLVE, the bulk of the in-situ observations of PSCs are of large scale extended structures associated with synoptic scale cooling. The nature of these structures is also determined by layers of high relative NO_y that have been stretched into thin layers by advective processes. Some of the in situ observations, however, are clearly correlated with gravity wave signatures. The first goal of this work is to catalog these cases and evaluate the relevant gravity wave parameters. In particular, we are interested in the intrinsic periods of the waves and their temperature amplitude, which are key ingredients in the nucleation process. Secondly, we will examine some rudimentary properties of the particle size distributions and composition comparing these with in situ observations of the more extended PSC features. Finally, we will attempt to ascertain the mechanism which generates the gravity waves.